JVC Instructions

Hi-Fi STEREO VIDEO CASSETTE RECORDER

BR-7000ERA

Ⓖ **Instructions**
Ⓓ **Bedienungsanleitung**
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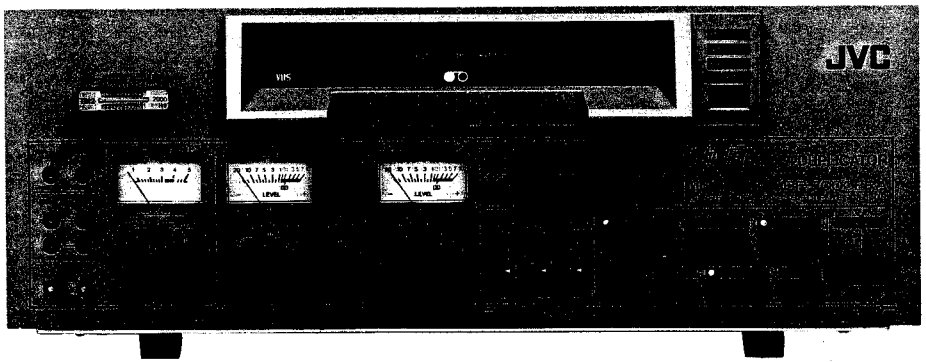
Ⓗ **Gebruiksaanwijzing**

This packet contains instructions in 6 different languages.
Refer to an appropriate version.



VHS

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JVC Instructions

Hi-Fi STEREO VIDEO CASSETTE RECORDER

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Hi-Fi VHS DUPLICATOR

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

Warning Notice
FOR YOUR SAFETY (Australia)

1. Insert this plug only into effectively earthed three-pin power outlet.
2. If any doubt exists regarding the earthing, consult a qualified electrician.
3. Extension cords, if used, must be three-core correctly wired.

FOR YOUR SAFETY

Install any external aerial to AS 1417.1

WARNING—THIS APPARATUS MUST BE EARTHED
IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

GREEN-and-YELLOW:	EARTH
BLUE:	NEUTRAL
BROWN:	LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows. The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the safety earth symbol ⏚ or coloured GREEN or GREEN-AND-YELLOW. The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or which is coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

CAUTION

To prevent electric shock, do not open the cabinet. No user serviceable parts inside. Refer servicing to qualified service personnel.

NOTE: The rating plate and the safety caution are on the rear of the unit.

POWER SYSTEM

Connection to the mains supply

The operating voltage of this set is preset to 240 V~ at the factory.

Before connecting to mains, check that the voltage selector on the rear panel is set to the same voltage as your local mains supply.

Adapting to local power line

This set operates on either 220 or 240 V~.

If the preset voltage is different from the power line voltage in your area, reset the voltage selector by inserting a screwdriver into the slot of the voltage selector and turning it until the correct voltage is displayed.

FEATURES

A New Hi-Fi VHS recorder designed exclusively for tape duplication with the following features:

Space-saving, front-loading and rack-mountable VHS recorder.

Heavy-duty mechanism

- Aluminium diecast chassis
- Head drum, capstan and reel servos with independent direct-drive motors to assure stable recording and playback.

Top quality Hi-Fi sound

- Independent rotary FM-audio heads
- Frequency response . . . . . 20 Hz to 20 kHz
- Dynamic range . . . . . 87 dB
- Harmonic distortion . . . . . less than 0.7 %
- Wow and flutter . . . . . less than 0.005 % (WRMS)
- Channel separation . . . . . more than 60 dB

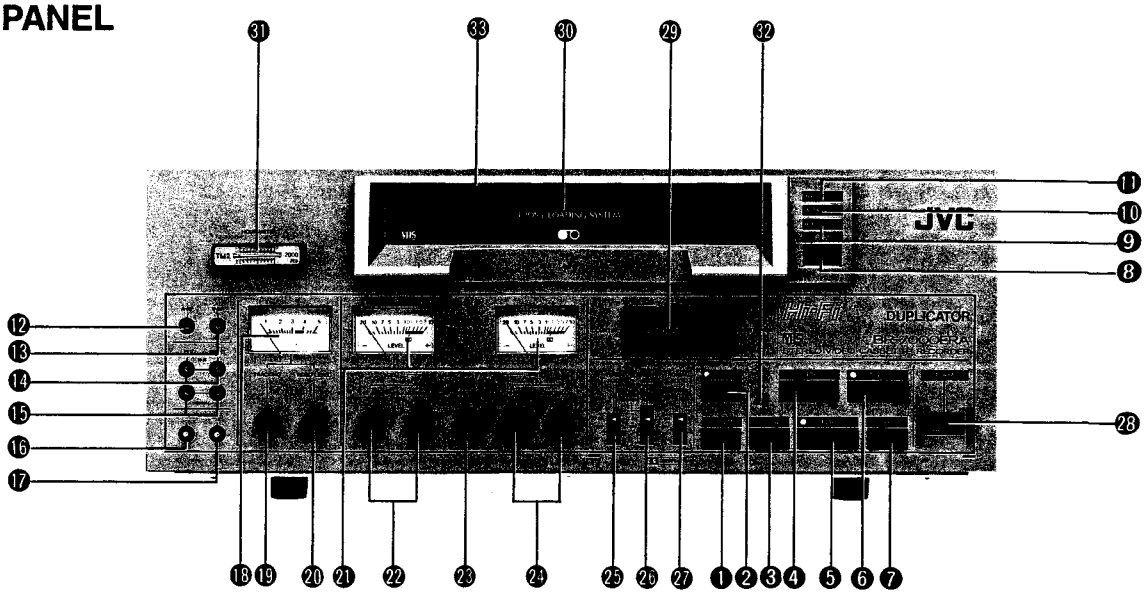
Duplicator-friendly operation

- Wide opening with a guide for easy loading and unloading of cassette.
- Large recording indicator for quick, at-a-glance checking.
- Recording capability of cassette with its recording safety tab removed.
- Large video/tracking and audio meters
- Cover for operational control buttons to avoid accidental misoperation.
- Video AGC on/off switch

Easy maintenance and serviceability

- Door for tape path cleaning
- Hour meter (2000H) indicating drum running time
- Test points on the front panel

FRONT PANEL



BASIC FUNCTION BUTTONS

❶ EJECT button
Press to eject the cassette. This button can be pressed in any mode. The EJECT LED will flash during automatic unloading of the cassette and then be extinguished upon completion of ejection.

❷ Record button (REC)
1. Pressing the REC and PLAY buttons simultaneously during playback engages the Record mode immediately and both REC LEDs light.
   (The PLAY LED also remains lit.)
2. Pressing the REC and PLAY buttons simultaneously during FF or REW engages the Stop mode first, then starts tape loading, after which recording begins.
3. Pressing the REC and PLAY buttons simultaneously in the Stop mode starts tape loading immediately, after which recording begins.
4. In cases 2 and 3 above, both REC LEDs light continuously and the PLAY LED blinks during tape loading and remains lit together with the two REC LEDs when recording begins.
5. If, during PLAY, the REC button is pressed, the E-E mode is entered for both video and audio, while the REC button is being held pressed.
   The picture may be distorted at switching points from PLAY to E-E or from E-E to PLAY. This is normal.

❸ Rewind button (REW)
1. Pressing the REW button in the Stop or Fast Forward mode engages the Rewind mode immediately, the REW LED lights.
2. Pressing the REW button in the Play, Pause, Record or Record Pause mode has no effect. (The current mode remains engaged.)
3. When the REW button is pressed during tape unloading (the STOP or EJECT button has been pressed in the Play or Record mode and the STOP or EJECT LED is blinking), the REW LED starts blinking and the STOP or EJECT LED is extinguished. The Rewind mode engages automatically, immediately after completion of tape unloading, with the REW LED remaining lit.

❹ STOP button
1. Pressing the STOP button during playback or recording starts tape unloading and engages the STOP mode.
2. Pressing the STOP button in the Fast Forward or Rewind mode, likewise, engages the Stop mode immediately.
3. During tape unloading the STOP LED blinks; upon completion of unloading, the STOP LED remains lit.

❺ PLAY button
1. Pressing the PLAY button in the Stop mode starts tape loading immediately for playback.
2. Pressing the PLAY button in the Fast Forward or Rewind mode causes the Stop mode to be entered first, then tape loading starts for playback.
3. The PLAY LED blinks during tape loading, and remains lit upon completion of loading.

❻ PAUSE button
1. Pressing the PAUSE button in the Play modestops tape running immediately, changes the video signal to the E-E mode and mutes the audio output. The PLAY LED is extinguished and the PAUSE LED lights.
2. Pressing the PAUSE button during the Record mode stops tape running with the Record mode still engaged. The PLAY LED remains lit, the PAUSE LED lights and both REC LEDs begin flashing.
3. To release the Pause mode to resume playback or recording, press the PLAY button.
4. The Record Pause mode can also be entered by pressing the REC and PAUSE buttons in the Stop, Rewind or Fast Forward mode.

❼ Fast Forward button (FF)
Same operation as the REW button.

INDICATOR SECTION

❽ REC indicator

❾ Hi-Fi REC indicator
Lights when the Hi-Fi audio signals are being recorded, with the Hi-Fi REC select switch ㉖ set to ON or REMOTE.

❿ WARNING indicator
This LED lights when the tape is not running properly or condensation occurs inside the unit.

⓫ Noise reduction (NR) indicator
Lights when the noise reduction switch (NR) is set to ON.

TEST POINTS

⓬ Hi-Fi audio head output signal test point (A-RF)
The Hi-Fi audio signal is output in the form of an FM signal during playback, allowing clogged or worn heads to be detected.

⓭ Video head output signal test point (V-RF)
The video head signal is output in the form of an FM signal during playback, allowing clogged or worn heads to be detected.

⓮ Hi-Fi audio output signal test points (LEFT and RIGHT)
To check the signals output from the rear panel Hi-Fi AUDIO OUT connectors.

⓯ NORMAL audio output signal test points (LEFT and RIGHT)
To check the signals output from the rear panel NORMAL AUDIO OUT connectors.

⓰ D-PULSE pin
Connect to the external trigger terminal of an oscilloscope.

⓱ GND pin
Connect to the ground terminal of an oscilloscope.

CONNECTORS

METER SECTION

⓲ **TRACKING/VIDEO LEVEL meter**
This meter functions as a tracking meter during playback and as a video level meter in any other mode.

⓳ **TRACKING control**
To minimise noise bars during playback, turn this control so that the meter ⓲ makes its maximum deflection.

⓴ **VIDEO LEVEL control**
To adjust the video signal level manually, set the VIDEO AGC switch ㉕ to OFF and turn this control so that the meter ⓲ deflects into the green area.

㉑ **LEFT/RIGHT AUDIO LEVEL meters**
Indicate the levels of the audio signals (playback signals during playback or E-E signals in any other mode).

㉒ **Hi-Fi/NORMAL LEFT AUDIO REC LEVEL controls**
To adjust the left channel Hi-Fi or NORMAL audio recording level, turn these controls so their corresponding meter ㉑ deflects to "0" with the loudest signal.

㉓ **Hi-Fi/NORMAL METER select switch**

㉔ **Hi-Fi/NORMAL RIGHT AUDIO REC LEVEL controls**
To adjust the right channel Hi-Fi or NORMAL audio recording level, turn these controls so their corresponding meter ㉑ deflects to "0" with the loudest signal.

㉕ **VIDEO AGC switch**
Set to ON to activate the built-in video AGC circuit.

㉖ **Hi-Fi REC select switch**
ON: Set to this position to record the Hi-Fi audio signals.
OFF: Set to this position when recording of the Hi-Fi audio signals is not desired. (Also FM carrier signal will be cut off).
REMOTE: Set to this position to remote-control above function via the serial code remote control.

㉗ **NORMAL AUDIO noise reduction switch (NR)**
Set to ON to activate the built-in Dolby* noise reduction system to reduce tape hiss.

㉘ **POWER button**
Press to turn the power on. The level meters will be illuminated. Pressing again will switch the power off.
Note:
If the POWER button is set to OFF in the Play mode, the pinch roller remains pressed by the capstan with the tape between the two. This causes deformation of the pinch roller rubber, resulting in irregular tape movement. Therefore, set the POWER button to OFF only after confirming that the unit is in the Stop mode.
(During actual tape unloading, while the STOP LED is blinking, do not press the POWER button.)

㉙ **Tape COUNTER and COUNTER RESET button**
This counter indicates the relative position on the tape. Pressing the COUNTER RESET button sets the counter to 0000.

㉚ **Cassette loading slot**
With the POWER button pressed to on, insert a video cassette with its labelled edge facing toward you. The cassette carriage itself will automatically take control and retract the cassette into the correct loaded position. The lower door flap will change colour to show that a cassette is loaded.

㉛ **HOUR METER**
This indicates the total operating time. After 2000 hours of operation, the red line moves to the right end of the scale. (Attach the meter securely before use.)

㉜ **Guard cover mounting hole**

㉝ **Tape path maintenance door**
For access to the tape path for cleaning, use a screwdriver to remove this cover.

* Dolby noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.
Dolby and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

REAR PANEL

❶ **AC input socket (AC IN)**
Connect to a 220 or 240 V∿, 50/60 Hz power outlet.

❷ **VOLTAGE SELECTOR**
Using a screwdriver, turn until the correct voltage (220 or 240 V) is displayed.

❸ **FUSE holder**

❹ **SERIAL CODE IN/OUT connectors**

❺ **Ground terminal**

❻ **REMOTE control connector (34-pin)**

❼ **VIDEO IN/OUT connectors**

❽ **Hi-Fi AUDIO IN connectors (LEFT and RIGHT)**

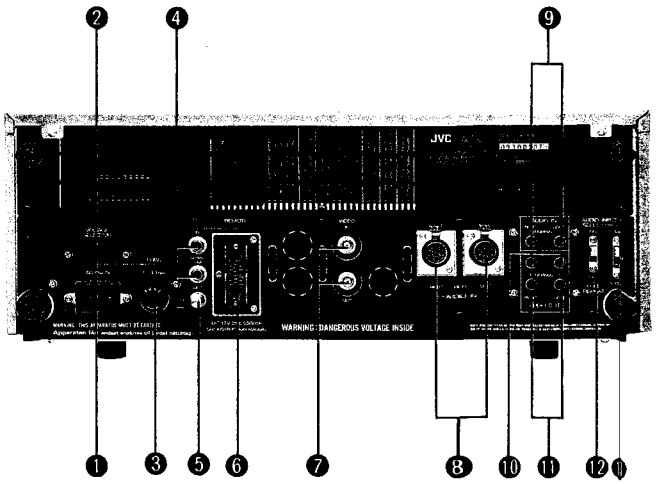
❾ **NORMAL AUDIO IN connectors (LEFT and RIGHT)**

❿ **Hi-Fi AUDIO OUT connectors (LEFT and RIGHT)**
Deliver signals of the Hi-Fi audio track.

⓫ **NORMAL AUDIO OUT connectors (LEFT and RIGHT)**
Deliver signals of the longitudinal audio track.

⓬ **FULL REPEAT switch**
ON: Set to this position to repeatedly play back the pre-recorded tape in its entirety.
OFF: Set to this position when the repeat function is not desired.

⓭ **AUDIO INPUT SELECT switch**
H COM: Set to this position to record the audio signals being input to the Hi-Fi AUDIO IN connectors onto both the Hi-Fi and longitudinal audio tracks — a "Hi-Fi Combined" recording.

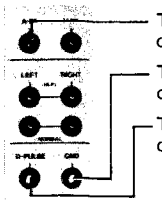
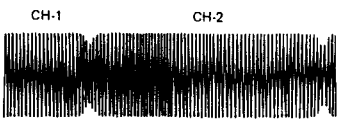
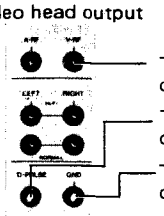
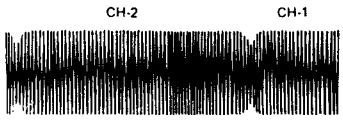
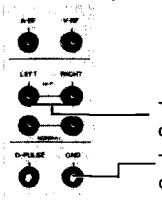
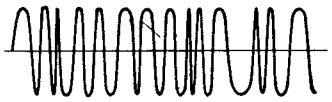
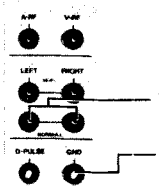
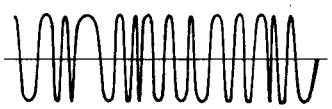


SEP: Set to this position to record the signals being input to the Hi-Fi AUDIO IN connectors onto the Hi-Fi audio track, and to the NORMAL AUDIO IN connectors onto the longitudinal audio track — a "Separate" recording.

N COM: Set to this position to record signals being input to the NORMAL AUDIO IN connectors onto both the Hi-Fi and longitudinal audio tracks — a "Normal Combined" recording.

TEST POINTS

The output signals from the Hi-Fi audio heads, video heads, Hi-Fi audio track and normal audio track are available at the front panel test points. Connect an oscilloscope to these test points to check the performance and condition of the unit.

Connection	Items to be checked	Standard waveform
Hi-Fi audio head output  To input terminal of oscilloscope To ground terminal of oscilloscope To external trigger terminal of oscilloscope	• Tape-to-head contact • Tape running stability • Inferior RF after head replacement	• "+" triggered 
Video head output  To input terminal of oscilloscope To external trigger terminal of oscilloscope To ground terminal of oscilloscope	• Compatibility of tape pattern • Tape-to-head contact • Tape running stability • Tracking • Video signal recording level • Abnormality in RF	• "+" triggered 
Hi-Fi audio output  To input terminal of oscilloscope To ground terminal of oscilloscope	• Quality of recording and playback	• Approx. -6 dBs output at reference input level • Output impedance: less than 5 k-ohms 
Normal audio output  To input terminal of oscilloscope To ground terminal of oscilloscope	• Quality of recording and playback • Tape-to-head contact, dirty head (fluctuation of audio level) • Alignment of audio/control head	• Approx. -6 dBs output at reference input level • Output impedance: less than 5 k-ohms 

SPECIFICATIONS

GENERAL

Format	: VHS 1/2" PAL Standard
Power requirement	: 220/240 V∿, 50/60 Hz
Power consumption	: 43 watts (Max. 55 watts with remote control unit, 12 V ⎓ , 550 mA)
Dimensions	: 440(W) x 174(H) x 448(D) mm
Weight	: 17.5 kg
Operating temperature	: 5°C to 40°C
Tape speed	: 23.39 mm/sec.
Recording time	: Max 240 min. with E-240 cassette
FF/REW time	: Less than 4.0 min. for E-180 cassette

VIDEO

Video signal system	: PAL colour and CCIR monochrome signals, 625 Lines
Input	: 0.5 to 2.0 Vp-p, 75 ohms, unbalanced
Output	: 1.0 Vp-p, 75 ohms, unbalanced
Signal-to-noise ratio	: 45 dB (B/W) (Rohde and Schwarz)
Horizontal resolution	: 250 Lines (Colour)

AUDIO

Input	: -6 dBs, 10 k-ohms, unbalanced (Normal) -6 dBs, 10 k-ohms, balanced (Hi-Fi)
Output	: -6 dBs, into 1 k-ohm, unbalanced (Normal, Hi-Fi)
Frequency response	: 20 Hz to 12 kHz (Normal) 20 Hz to 20 kHz (Hi-Fi)
Dynamic range	: 87 dB (Hi-Fi)
Signal-to-noise ratio	: 46 dB (NR-on), 42 dB (NR-off) (Normal) at 3 % distortion
Wow and flutter	: Less than 0.005 % wrms (Hi-Fi)

CONNECTORS

Video input/output	: BNC-type
Audio input	: XLR (Hi-Fi) RCA (Normal)
Audio output	: RCA (Hi-Fi, Normal)
Remote control	: 34-pin connector
AC IN	: 3-Wired AC connector
Accessories	: Hour meter x 1

Design and specifications subject to change without notice.

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JVC

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